



**California Environmental Protection Agency
Department of Toxic Substances Control**

HAZARDOUS WASTE FACILITY PERMIT

Facility Name and Location:

Sandia National Laboratories
7011 East Avenue
Livermore, California 94550-9517

Permit Number: _____

Facility Owner:

United States Department of Energy
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

Facility EPA ID No.:

CA 2890012923

Effective Date:

Expiration Date:

Facility Operator

U.S. Department of Energy/
Sandia National Laboratories
P.O. Box 969
Livermore, California 94550-0969

Pursuant to Section 25200 of the California Health and Safety Code, this RCRA-equivalent Hazardous Waste Facility Permit is hereby issued to the United States Department of Energy/Sandia National Laboratories/California. The issuance of this permit is subject to the conditions set forth in Attachment A and the approved Part "B" Application (Operation Plan) dated September, 2003 . The Permit consists of a total of 40 pages including the cover page and Attachment "A".

Mohinder S. Sandhu, P.E., Chief
Standardized Permitting and Corrective Action Branch
Hazardous Waste Management Program

Date

Attachment "A"
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**UNITED STATES DEPARTMENT OF ENERGY/
SANDIA NATIONAL LABORATORIES
7011 EAST AVENUE
LIVERMORE, CALIFORNIA 94550-9517
EPA ID NO CA 2890012923**

PART I. DEFINITIONS

All terms used in this Permit shall have the same meaning as those terms have in the California Health and Safety Code, Division 20, Chapter 6.5 and Title 22, California Code of Regulations Division 4.5, unless expressly provided otherwise by this Permit.

1. "DTSC" as used in this Permit means the California Department of Toxic Substances Control.
2. "Permittee" as used in this Permit means the Owner and Operator.
3. "Cal. Code Regs." as used in this Permit means the California Code of Regulations.
4. Unless explicitly stated otherwise, all references to items in this Permit shall refer only to items occurring within the same part.
5. "Mixed waste" as used in this Permit means waste that contains Resource Conservation and Recovery Act (RCRA) hazardous waste and source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954 as amended (42 U.S.C. 2011 et seq.).
6. "Combined waste" as used in this Permit means waste that contains non-Resource Conservation and Recovery Act (RCRA) hazardous waste and source, special nuclear, or by-product subject to the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)

PART II. DESCRIPTION OF THE FACILITY AND OWNERSHIP

1. OWNER

The facility's legal owner is the United States Department of Energy, P.O. Box 5400, Albuquerque, New Mexico 87185-5400 (hereafter "owner").

2. OPERATOR

The facility operators are the United States Department of Energy and Sandia National Laboratories, 7011 East Avenue, Livermore, California 94550-9517 (hereafter "Operator").

3. LOCATION

The United States Department of Energy/Sandia National Laboratories (Sandia) is located at 7011 East Avenue, Livermore, California at latitude 37° 40' 30" and longitude 121° 42' 001". It lies at the base of Altamont Hills, 50 miles east of San Francisco (see Figure 1, Regional Location). The real property is situated in the unincorporated area of the Township of Murray, County of Alameda, State of California. The legal description of the property is as follows: a portion of Section 13, Township 3 South, Range 2 East, Mount Diablo Base and Meridian, also being a portion of Plot K of the map of Rancho Las Positas, a copy of the said map was filed for record on June 16, 1873 in Lieber 95 of Deeds, page 205, Alameda County Records. The whole facility is bordered by East Avenue in the north, Tesla Road in the south, Greenville Road in the east and Vasco Road in the west (see Figure 2, Location Map).

The Hazardous Waste Treatment and Storage Facility (HWTSF) is located in the middle of the Sandia facility in between Seventh Street and Eighth Street as shown in Figure 2, Location Map. The HWTSF can be accessed from "A" Street. It includes Building 961, Building 9611, two Roll-off Bins, one Conex, two Drum/Solid Waste Compactors, and one Solid Waste Compactor.

4. DESCRIPTION

The United States Department of Energy and Sandia National Laboratories (Sandia) are joint operators of the Sandia Facility. US DOE is responsible for policy, programmatic, funding and scheduling decisions as well as general oversight of the HWTSF which is the subject of this permit. Sandia is responsible for the day-to-day operations such as waste analysis and handling, monitoring, record keeping, reporting and contingency planning of the HWTSF. Hazardous wastes are generated at different locations throughout the Sandia facility, and are

taken to the HWTsf for consolidation, compaction and storage, before they are shipped off-site for further treatment or disposal.

The HWTsf provides on-site storage and treatment of hazardous wastes. Hazardous wastes handled include coolants, aerosols, asbestos, batteries, acids, caustics, low level mixed wastes, scintillation cocktail, wastewater, solvents, photochemical waste, low level PCB waste from demolition/clean-up activities, oil wastes, lab packs and empty drums. Detailed information on these wastes can be found in Part IV of this Permit. The regulated waste management activities include storage and treatment in containers, and treatment in miscellaneous units. Treatment of hazardous wastes consists of consolidation and commingling of similar wastes in containers, and physical treatment of wastes using solid waste compactors and a drum compactor.

5. FACILITY SIZE AND TYPE FOR FEES

The facility is categorized as a medium treatment and storage facility for purposes of Health & Safety Code, sections 25205.4 and 25205.19. The operators shall be both operators within the meaning of Health and Safety Code sections 25205.2 and 25205.4, and shall be jointly and severally responsible for all fees assessed pursuant to these sections.

PART III. GENERAL CONDITIONS

1. PERMIT APPLICATION DOCUMENTS

The Part "A" Application and Part "B" Application dated September 2003 (hereafter "Application") are hereby made a part of this Permit by reference.

2. EFFECT OF PERMIT

- (a) The Permittee shall comply with the provisions of the California Health and Safety Code, and Division 4.5 of Title 22, California Code of Regulations (Title 22, Cal. Code Regs.). The issuance of this Permit by DTSC does not release the Permittee from any liability or duty imposed by federal or state statutes or regulations or local ordinances, except the obligation to obtain this Permit. The Permittee shall obtain the permits required by other governmental agencies, including but not limited to, the applicable land use planning, zoning, hazardous waste, air quality, water quality, and solid waste management laws for the construction and/or operation of the Facility.
- (b) The Permittee is permitted to treat and store hazardous wastes in accordance with the conditions of this Permit. Any treatment or storage of hazardous wastes not specifically authorized in this Permit is strictly prohibited.
- (c) Compliance with the terms of this Permit does not constitute a defense to any action brought under any other law governing protection of public health or the environment, including, but not limited to, one brought for any imminent and substantial endangerment to human health or the environment.
- (d) DTSC's issuance of this Permit does not prevent DTSC from adopting or amending regulations that impose additional or more stringent requirements than those in existence at the time this Permit is issued and does not prevent the enforcement of these requirements against the Permittee.
- (e) Failure to comply with any term or condition set forth in the Permit in the time or manner specified herein will subject the Permittee to possible enforcement action including but not limited to penalties pursuant to Health & Safety Code Section 25187.
- (f) In addition, failure to submit any information required in connection with the Permit, or falsification and/or misrepresentation of any submitted

information, is grounds for revocation of this Permit (Title 22, Cal. Code of Regs., section 66270.43).

- (g) The Permittee shall furnish to DTSC, within the time specified by DTSC in its request, any relevant information which DTSC may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to DTSC, upon request, copies of records required to be kept by this Permit.
- (h) Where the Permittee becomes aware that any relevant fact was not included in the permit application, or incorrect information was submitted in the permit application or in any report to DTSC, the Permittee shall promptly correct the error or omission by submitting the correct information to DTSC.
- (i) In accordance with Title 22, Cal. Code Regs., section 66270.51, this Permit and all conditions therein will remain in effect beyond the permit expiration or termination date, until the effective date of a new permit, if the Permittee has submitted a timely and complete application (both part A and Part B) for a new permit and, through no fault of the Permittee, DTSC has not issued a new permit. In accordance with Title 22, Cal. Code Regs., section 66270.10(h), a timely and complete application for a new permit shall be submitted at least 180 days before this permit expires, unless permission for a later date is granted in writing by DTSC.
- (j) This Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination or a notification of anticipated noncompliance or planned changes does not stay any permit condition. Except as provided in Title 22, Cal. Code Regs. Section 66270.42(a), a modification of an existing facility permit condition shall become effective on the date specified in the DTSC's written notice of approval of the permit modification, pursuant to Title 22, Cal. Code Regs. sections 66270.42 and/or 66271.14.
- (k) This Permit may be transferred pursuant to Title 22, Cal. Code Regs., section 66270.40. The Permittee shall notify the Standardized Permitting and Corrective Action Branch Chief, Berkeley Office, in writing, of a proposed change in ownership of this facility no later than 90 days prior to the proposed date of transfer. A copy of the notification, required under Title 22, Cal. Code Regs., section 66264.12(c), informing the new Permittee of the requirements of this permit and Title 22, Cal. Code Regs., division 4.5, chapters 14 and 20, shall be submitted to DTSC prior to transfer.

- (l) The Permittee shall comply with the signatory requirements for all applications, reports or information submitted to DTSC as required by Title 22, Cal. Code Regs., section 66270.11.
- (m) The Permittee shall not dispose hazardous wastes at the facility as required by Health & Safety Code Section 25203.
- (n) The Part B Permit Application dated September 2003, this Permit and all modifications, revocations, reissuances, and terminations of this Permit shall be maintained at the Hazardous Waste Storage and Treatment Facility and the Sandia Environmental Operations Department at all times until closure is completed.
- (o) In case of conflicts between the Operation Plan and the Permit, the Permit conditions take precedence.
- (p) This Permit includes and incorporates by reference any conditions of waste discharge requirements (WDR) in the Waste Water Discharge Permit issued by the City of Livermore, Water Resources Division and any conditions imposed pursuant to section 13227 of the Water Code.

3. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

A Negative Declaration has been prepared in accordance with the requirements of Public Resources Code Section 21000 et seq. and the CEQA Guidelines, Section 15061(b)(3) et seq. of Title 14, California Code of Regulations.

4. WASTE MINIMIZATION CERTIFICATION

Pursuant to Health & Safety Code, section 25202.9 the Permittee shall certify annually, by March 1 for the previous year ending December 31, that:

- (a) The facility has a program in place to reduce the volume and toxicity of all hazardous wastes listed in Section III of the approved Operation Plan dated September, 2003, which are generated by the facility operations to the degree, determined by the Permittee, to be economically practicable.
- (b) The method of treatment is the only practicable method or combination of methods currently available to the facility which minimizes the present and future threat to human health and the environment.

The Permittee shall make this certification, in accordance with Title 22, Cal. Code of Regs., section 66270.11. The Permittee shall submit the certification to the Branch Chief, Standardized Permitting and Corrective Action Branch,

Department of Toxic Substances Control, 700 Heinz Avenue, Berkeley, California 94710-2721 and shall record and maintain onsite such certification in the facility Operating Record.

5. WASTE MINIMIZATION CONDITIONS

- (a) The Permittee shall comply with the Hazardous Waste Source Reduction and Management Review Act (SB 14) requirements that are specified in the Health & Safety Code, sections 25244.19, 25244.20 and 25244.21, and any subsequent applicable statutes or regulations promulgated thereunder. This would include submittal of SB 14 documents to DTSC upon request.
- (b) DTSC may require the Permittee to submit a more detailed status report explaining any deviation from, or changes to, the approved waste minimization plan.

PART IV. PERMITTED UNITS AND ACTIVITIES

This Permit authorizes operation only of the facility units and activities listed below. The Permittee shall not treat or store hazardous waste in any unit other than those specified in this Part IV. Any modifications to a unit or activity authorized by this Permit require the written approval of DTSC in accordance with the permit modification procedures set forth in Title 22, Cal. Code Regs.

UNIT #1:

Building 961

LOCATION:

Building 961 is located in the middle of Sandia facility bordered by "A" Street in the east, 7th Street in the north, and "C" Street in the west. Building 961 is immediately adjacent to Building 9611. Arroyo Seco Creek runs parallel to the adjacent 7th Street. Building 961 and Building 9611 are 300 feet south of Arroyo Seco Creek. Building 961 can be accessed either from "C" Street or "A" Street from the main entrance to East Avenue (Refer to Figure 3, Facility Layout Map).

ACTIVITY TYPE:

Storage of Low Level Mixed Wastes and Combined Wastes in Containers

ACTIVITY DESCRIPTION:

Building 961 is used to store low level mixed wastes and combined wastes generated from various research and development projects at Sandia. The wastes include the following: scintillation cocktail and low level mixed waste and combined waste contaminated debris from laboratory operations.

PHYSICAL DESCRIPTION:

Building 961 is an insulated prefabricated metal building adjacent and attached to Building 9611. Building 961 has an area of 3,452 square feet. The walls are made of steel metal with insulation inside. The floor is made of a 6 - inch concrete slab with chemical resistant epoxy coating.

There are three metal roll-up doors at Building 961. One roll-up door is located at the east side of the building facing "A" Street; the second roll-up door is located at the west side leading to the common loading dock for Building 9611; the third roll-up door is at

the north side of the building facing "7th" Street. Building 961 has containment troughs at the west and east side of the building connected to the secondary containment in the north half side of Building 961. The secondary containment is coated with chemical resistant epoxy coating with non-skid grit finish and have galvanized metal gratings which are corrosion resistant. Building 961 is equipped with a full sprinkler system and a fire alarm system.

In the southeast corner of Building 961, there is a small storage area for radioactive material calibration sources. This room is locked when unattended. Building 961 has an exhaust laboratory hood equipped with High Efficiency Particulate Air (HEPA) filter. Low level mixed waste and combined waste contaminated debris are accumulated in small containers; these small containers are stored in drums or 56 cubic feet metal boxes or 120 cubic feet metal boxes for shipment to an appropriate out-of-state disposal facility.

MAXIMUM CAPACITY:

The maximum capacity for storing low level mixed wastes and combined wastes at Building 961 is 2,244 gallons or 300 cubic feet. These wastes are stored in strong-tight containers or Department of Transportation (DOT) specification metal shipping containers.

WASTE RESOURCES:

Low level mixed wastes and combined wastes, e.g. scintillation cocktail and contaminated debris are generated from laboratories and supporting operations.

WASTE TYPES:

Low level mixed wastes and combined wastes handled at Building 961 include liquid scintillation cocktail with toluene and xylene, and the Packard Ultima Gold XR Scintillation fluid with diisopropyl naphthalene isomers, ethoxylated alkylphenol, bis(2-ethylhexyl) hydrogen phosphate, triethyl phosphate, sodium di-octylsulphosuccinate and 3,6-dimethyl-4 octyne-3,6-diol as hazardous waste constituents, and the solid waste contaminated with solvents, oil, lead, mercury, cadmium, arsenic, barium, selenium, silver and chromium.

RCRA HAZARDOUS WASTE CODES:

Liquid Scintillation Cocktail D001, F003, F005
Contaminated debris D001, D004, D005, D006, D007, D008, D009, D010,
D011, F001, F002, F003, F004, F005

CALIFORNIA HAZARDOUS WASTE CODES:

Liquid Scintillation Cocktail 213, 214, 343

Contaminated debris 181, 223, 551, 352, 151

UNIT SPECIFIC SPECIAL CONDITIONS:

1. The Permittee is authorized to store only low level mixed waste and combined waste in Building 961 up to a maximum of one calendar year from the date of receipt at the facility. No hazardous only waste shall be stored in Building 961. Upon receipt at the facility, the Permittee shall mark the date of acceptance and maintain the original generator labels on all containers of mixed waste until such time as the waste is treated or transferred off-site.
2. The Permittee may store mixed waste and combined waste in DOT approved containers at Building 961 up to a maximum volume of 2,244 gallons or 300 cubic feet. The maximum volume shall govern regardless of the size of containers used.
3. The containers shall be properly labeled according to the California Code of Regulations, Title 22, section 66262.34, and may be stacked no more than two containers high.
4. Any hazardous waste not listed in Section III of Part B application dated September 2003 shall not be handled at the facility.
5. The Permittee shall not store liquid polychlorinated biphenyls (PCBs) or explosive waste in the storage areas or containers.
6. A sign "Low-Level Mixed Waste and Combined Waste" must be posted at the area where it is being stored in Building 961.
7. A minimum aisle space of thirty (30) inches shall be maintained to allow for unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation.

AIR EMISSION STANDARDS, SUBPART CC:

Building 961 is not subject to the Air Emission Standards of the California Code of Regulations, Title 22, division 4.5, chapter 14, article 28.5 for the following reason:

- (1) This unit is used solely for the management of low level mixed waste (Title 22, Cal Code Regs., section 66264.1080(b)(6)).

UNIT #2:

Building 9611

LOCATION:

Building 9611 is located in the middle of Sandia facility bordered by "A" Street in the east, 7th Street in north, and "C" Street in the west. Arroyo Seco Creek runs parallel to the adjacent 7th Street. Building 9611 and Building 961 are approximately 300 feet south of Arroyo Seco Creek. Building 9611 can be accessed either from "C" Street or "A" Street from the main entrance of East Avenue (Refer to Figure 3, Facility Layout).

ACTIVITY TYPE:

Storage of Hazardous Waste in Containers

ACTIVITY DESCRIPTION:

Wastes generated from various operations, and research and development projects at Sandia are stored separately in containers in different storage bays inside Building 9611. The wastes include the following: spent coolant, empty aerosol cans, asbestos cleanup waste, PCB cleanup waste, lead contaminated wastewater from the gun range, wastewater from the Liquid Effluent Control (LEC) system which did not meet the municipal wastewater discharge requirements, used batteries, spent solvents, acids, caustics, oily wastes, off-specification chemicals, solvent contaminated rags and wipes, photochemical wastes, empty drums, and other laboratory waste.

PHYSICAL DESCRIPTION:

Building 9611 is an insulated prefabricated metal building adjacent and attached to Building 961. It has an area of 8,422 square feet. The lower wall is 5 feet high, 6 inches thick concrete. The upper wall extending to the roof is constructed of steel with insulation inside. This building has a loading dock covered with a roof.

The floor is constructed of 6-inch concrete slab with chemical resistant epoxy coating. It has containment troughs within each storage bay, at the center floor of the building and at building exits; these containment troughs are also coated with chemical resistant epoxy coating with non-skid grit finish. The building is equipped with a full sprinkler system and a fire alarm system. The roof of the building has a skylight which provides added natural lighting inside the building in addition to the fluorescent electrical lighting. Emergency lighting is provided by a battery pack. There is a roll-up door at the south side of the building leading to the loading dock. The loading dock measures 25 feet by 80 feet and can accommodate two trucks at a time. The loading dock area has a roof cover, lighting and secondary containment to collect potential spills. It also has dock

levelers or lifts to accommodate different truck bed heights. The northern edge of the dock has a railing and 4 x 4 inches angle-on-slab to keep people and equipment from falling off the dock.

Building 9611 has an air-conditioned office and a rest room. There are nine storage bays, an area for a magazine, and an air-conditioned Lab Pack Area. The Lab Pack Area has a fume hood with High Efficiency Particulate Air (HEPA) filtration on the exhaust system. The information related to the Lab Pack Area, the nine separate storage bays and the corresponding wastes stored in each bay are listed in Table 1. Each of the nine storage bays have a separate containment sump to accommodate any potential spills. The bays are designed for forklift loads and have Fiberglass Reinforced Plastic (FRP) gratings which are corrosion resistant. The magazine is used for storing perchloric acid waste and other oxidizing acids mixed with solvents. The magazine is made of 5 inches concrete on top, 6.5 inches concrete on the bottom, and 9 inches concrete on all sides. The shell is 3/16 inches aluminum box. The door of the magazine has two latches and two 1-inch thick crash bars. Secondary containment trays are located inside the magazine and provide 100 percent secondary containment for all liquids placed inside.

Table 1. Dimensions of each of the nine storage bays and Lab Pack Area at Building 9611 and corresponding hazardous wastes stored in each bay.		
Bays	Dimensions	Hazardous Waste Stored Predominantly
Lab Pack Area	24 feet x 21.7 feet (air conditioned with exhaust system and metal roll-up door separating it from the main storage bays)	Off-specification chemicals, gases, lecture bottles
Magazette	56 inches x 32.5 inches x 38.5 inches (Outside dimensions)	Perchloric acid and other oxidizing acids mixed with solvents
Bay 1	7.1 feet x 20 feet	Photochemical waste and empty aerosol cans
Bay 2	7.1 feet x 20 feet	Spent halogenated and non-halogenated solvents from various research laboratories
Bay 3	7.1 feet x 20 feet	Caustics
Bay 4	7.1 feet x 20 feet	Batteries, solvent contaminated rags and wipes
Bay 5	7.1 feet x 20 feet	Acids
Bay 6	14.0 feet x 13.7 feet (with exhaust system above Bay 6)	Used oil, Spent coolant or PCB contaminated waste
Bay 7	14.0 feet x 13.7 feet (with exhaust system above Bay 7)	Used oil, Spent coolant, or PCB contaminated waste
Bay 8	14.0 feet x 13.7 feet (with exhaust system above Bay 8)	Solvent contaminated rags and wipes or PCB contaminated waste
Bay 9	21.5 feet x 7.0 feet (with door and exhaust system)	Spent halogenated and non-halogenated flammable solvent and gases

MAXIMUM CAPACITY:

The maximum capacity for the Lab Pack Area and the nine storage bays are listed in Table 2.

Table 2. Maximum storage capacity for the Lab Pack Area and the nine storage bays at Building 9611			
Bays	Maximum Capacity		
Lab Pack Area	905 gallons	or	16-55 gallon drums
Magazette	5 gallons	or	19 liters in small containers
Bay 1	1,760 gallons	or	32-55 gallon drums
Bay 2	1,760 gallons	or	32-55 gallon drums
Bay 3	1,760 gallons	or	32-55 gallon drums
Bay 4	1,760 gallons	or	32-55 gallon drums
Bay 5	1,760 gallons	or	32-55 gallon drums
Bay 6	1,320 gallons	or	24 -55 gallon drums
Bay 7	1,320 gallons	or	24 -55 gallon drums
Bay 8	2,640 gallons	or	48-55 gallon drums
Bay 9	1,760 gallons	or	32-55 gallon drums

WASTE RESOURCES:

Spent coolant and used oil wastes are generated from Sandia facilities vehicle maintenance and machine shop. Empty aerosol cans are generated from Sandia facilities paint shop. Asbestos and PCB wastes are generated from cleanup operations at Sandia. Wastewater, generated from various laboratory operations which do not meet the wastewater municipal discharge requirements of the City of Livermore, is managed as hazardous waste. Lead contaminated wastewater is generated from the gun firing range. Photochemical waste is generated from the photo laboratory. Perchloric acids and other oxidizing acids, off-specification chemicals, used batteries, acids, caustics, solvent-contaminated rags and debris, and empty containers are generated from various laboratory operations at the Sandia facility. Detailed information of these wastes can be found in Section III of the Part B Application dated September 2003.

WASTE TYPES:

Hazardous wastes handled at Building 9611 include spent coolant, empty aerosol cans, asbestos waste, wastewater, used batteries, spent halogenated and non-halogenated solvents, acids, caustics, used oil wastes, off-specification chemicals, perchloric acids and other oxidizing acids mixed with solvents, solvent-contaminated rags and wipes, photochemical wastes, and empty containers.

RCRA HAZARDOUS WASTE CODES:

Spent Coolant	none
Asbestos waste	none
Used Oil wastes	none
Empty drums	none
Empty paint aerosol cans	D001, F001, F002, F003, F004, F005
Solvent contaminated rags and wipes	D001, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D023, D024, D025, D026, D035, D036, D038, D039, D040, F001, F002, F003, F004, F005
Photochemical waste	D002, D006, D011
Used batteries	D002, D006, D008, D009, D011
Off specification chemical for lab packs	Wastes listed in Appendix A of the Operation Plan dated September 2003
PCB contaminated waste	None
Wastewater	D005, D006, D007, D008, D009, D010, D011
Spent halogenated and non-halogenated solvents	D001, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D023, D024, D025, D026, D035, D036, D038, D039, D040, F001, F002, F003, F004, F005
Caustic waste	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D023, D024, D025, D026, D035, D036, D038, D039, D040
Acid waste	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D023, D024, D025, D026, D035, D036, D038, D039, D040

CALIFORNIA HAZARDOUS WASTE CODES:

Spent Coolant	132, 133, 134, 135, 221, 223, 343
Asbestos waste	151
Used oil wastes	221, 222, 223, 741, 751
Empty drums	511, 512, 513
Empty paint aerosol cans	211, 212, 343
Solvent contaminated rags and wipes	181, 352, 551, 751
Photochemical waste	121, 122, 123, 541, 791, 792
Used batteries	181
Off specification chemical for lab packs	Wastes listed in Appendix A of the Operation Plan dated September 2003
PCB contaminated waste	261, 731
Wastewater	131, 132, 133, 134, 135
Spent solvents	211, 212, 213, 214, 741
Caustic waste	121, 122, 123
Acid waste	791, 792

UNIT SPECIFIC SPECIAL CONDITIONS:

1. The Permittee may store hazardous waste in DOT approved containers at Building 9611 up to a maximum volume specified in Table 2 of this Permit. The maximum volume shall govern regardless of the size of containers used.
2. Wastes can be stored in bays other than described in Table 1 based on chemical compatibility and capacity of the bay. A sign must be posted to identify the group of hazardous wastes being stored in each area or bay.
3. The Permittee shall stack all DOT-approved containers of hazardous waste no more than two containers high.
4. The Permittee is authorized to store hazardous wastes up to a maximum of one calendar year from the date of receipt at the HWTsf. Upon receipt at the facility, the Permittee shall mark the date of acceptance and maintain the original generator labels on all containers of hazardous waste until such time as the waste is transferred off-site.

5. The Permittee shall inventory lab packs prior to shipment to a permitted off-site disposal facility.
6. Any hazardous waste not listed in Section III of Part B application dated September 2003 shall not be handled at the facility.
7. The Permittee shall not store radioactive, explosive waste or mixed waste in Building 9611.
8. The Permittee shall maintain thirty (30) inches aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation.

AIR EMISSION STANDARDS, SUBPART CC:

1. The Permittee shall control air pollutant emissions from containers having a design capacity greater than 0.1 cubic meter (m^3) [equivalent to 30-gallon drum] and less than or equal to 0.46 m^3 [equivalent to 120-gallon drum] in accordance with the Container Level 1 standards specified in subsection (c) of Title, Cal. Code of Regs., section 66264.1086.
2. The Permittee shall install all covers and closure devices for containers, as applicable to the container, and secure and maintain each closure device in the closed position except when adding hazardous waste or other material to the container to fill to the intended final level.
3. The Permittee shall secure the closure devices of containers in the closed position upon filling to the intended final level or when leaving the vicinity of the container being filled.
4. The Permittee shall visually inspect weekly the containers and their covers and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container. When a defect is detected in the container, cover or closure devices, the Permittee shall make an effort to repair the defect within 24 hours after detection and repair shall be completed as soon as possible but no later than 5 calendar days after detection.

UNIT #3:

Roll-off Bins (2)

LOCATION:

Up to two roll-off bins will be located on the paved yard west of Building 9611. Building 9611 can be accessed either from "C" Street or "A" Street from the main entrance of East Avenue (Refer to Figure 3, Facility Layout).

ACTIVITY TYPE:

Storage in Containers

ACTIVITY DESCRIPTION:

Contaminated solid equipment, solid debris such as asbestos generated from the demolition/clean-up activities within the Sandia facility are stored in two roll-off bins located on the paved yard outside and adjacent to Building 9611.

PHYSICAL DESCRIPTION:

Up to two 40-yard roll-off bins will be used at Sandia. The roll-off bins are metal containers made of steel. These roll-off bins are rented from an authorized hazardous waste hauler and delivered to Sandia clean and free of hazardous waste. An empty weight of a bin averages about 6,500 pounds (or 3¼ tons). The overall dimensions of a 40-yard roll-off bin is 21 feet long by 8.5 feet wide by 8.5 feet tall. Each bin has a capacity to contain 1,080 cubic feet of debris. The roll-off bins may include: (1) a closed top with barn doors or swing doors, (2) open top with slide top, (3) low-boy bins with open top, and (4) open top with barn door or swing doors. The type of bin used depends on the type of waste stored. Bins may be lined depending on the type of waste being stored. Bins that have open top are covered with a water resistant tarp while in storage or in transit. No liquid wastes are stored in the bins.

The wastes in the bin are protected from the weather elements by use of the sliding close top or water resistance tarp. After the truck disposes of the waste, the bin is cleaned at the disposal facility.

MAXIMUM CAPACITY:

The maximum capacity for storing contaminated debris in two roll-off bins is 80 cubic yards or 2,160 cubic feet.

WASTES RESOURCES:

Hazardous wastes stored at the roll-off bins include the contaminated solid equipment, asbestos waste and debris from demolition/clean-up activities.

RCRA HAZARDOUS WASTE CODES:

Asbestos	None
Contaminated Debris	D004, D005, D006, D007, D008, D009, D010, D011

CALIFORNIA HAZARDOUS WASTE CODES:

Asbestos	151
Contaminated Debris	181, 352

UNIT SPECIFIC SPECIAL CONDITION:

1. The Permittee shall not store liquid wastes in roll-off bins.
2. The Permittee shall store wastes that are specified in the Permit for this unit.
3. The Permittee shall keep the roll-off bins covered at all times.

AIR EMISSION STANDARDS, SUBPART C:

Roll-off bins are not subject to the Air Emission Standards of the California Code of Regulations, Title 22, division 4.5, chapter 14, article 28.5 for the following reason:

- (1) Managed waste stream has an average volatile organic concentration of less than 500 parts per million by weight (Title 22 CCR 66264.1082(c)(1)).

UNIT #4:

Conex (1)

LOCATION:

One Conex will be located on the paved yard southwest of Building 9611. Building 9611 can be accessed either from "C" Street or "A" Street from the main entrance of East Avenue (Refer to Figure 3, Facility Layout).

ACTIVITY TYPE:

Storage in Containers

ACTIVITY DESCRIPTION:

RCRA-empty containers are stored in the Conex.

PHYSICAL DESCRIPTION:

A Conex is a used to store RCRA and non-RCRA empty containers. An empty weight of a Conex averages about 6,500 pounds (or 3¼ tons). The overall dimensions of a Conex is 40 feet long by 9 feet wide by 10 feet tall. The Conex has closed top, a swing door and a center roll-up door.

MAXIMUM CAPACITY:

The maximum capacity for storing RCRA-empty containers in a Conex is 500 cubic feet or 20 cubic yard.

WASTES RESOURCES:

Hazardous wastes stored in the Conex include RCRA-empty containers which were used at various research and development laboratories at Sandia. These are picked up by a recycler for reconditioning and recycling.

RCRA HAZARDOUS WASTE CODES:

Empty Containers None

CALIFORNIA HAZARDOUS WASTE CODES:

Empty Containers 512, 513, 511

UNIT SPECIFIC SPECIAL CONDITION:

1. The Permittee shall not store liquid wastes in the Conex.
2. The Permittee shall store wastes that are specified in the Permit for this unit.
3. The Permittee shall keep the containers inside the Conex at all times.

AIR EMISSION STANDARDS, SUBPART C:

Conex is not subject to the Air Emission Standards of the California Code of Regulations, Title 22, division 4.5, chapter 14, article 28.5 for the following reason:

- (1) Managed waste stream has an average volatile organic concentration of less than 500 parts per million by weight (Title 22 CCR 66264.1082(c)(1).

UNIT #5:

Drum Compactor in Building 961

LOCATION:

The Drum Compactor is currently located inside Building 961 next to the Solid Waste Compactor and adjacent to the Radioactive Material Source Room (Refer to Facility Layout, Figure 3). This Drum Compactor may be retrofitted at a later date to make it explosion proof and capable of compacting drums with ignitable residues.

ACTIVITY TYPE:

On-site Treatment in Miscellaneous Unit

ACTIVITY DESCRIPTION:

Treatment consists of on-site compaction of empty drums contaminated with low level radioactive mixed waste prior to shipment to an appropriate authorized disposal facility. The Drum Compactor, S&G Enterprises, Inc. Model 55E, is used for compacting empty dry containers (see Figure 4). Empty containers being compacted include fiber, poly, and metal containers generated from various operations at Sandia. Following compaction, the compacted empty containers are packaged in DOT approved shipping container for disposal to an appropriate authorized disposal facility.

PHYSICAL DESCRIPTION:

S&G Enterprises, Inc. Drum Compactor Model 55E, commonly referred to as a Ram Flat Compactor, is shown in Figure 4. It compresses empty 55-gallon containers or smaller to 10 % of its original size. Before a drum is compacted, diatomaceous earth is added to the drum to ensure that no freestanding liquid or moisture remains inside. A full-size door covers its steel compacting chamber making the compacting area fully enclosed.

MAXIMUM CAPACITY:

One 55-Gallon Drum

WASTE RESOURCES:

Empty containers to be compacted include 55 gallon or less empty fiber, poly, and metal containers contaminated with low level radioactive mixed waste. These are generated from various operations and laboratories at Sandia.

RCRA HAZARDOUS WASTE CODES:

None

CALIFORNIA HAZARDOUS WASTE CODES:

511, 512, 513

AIR EMISSION STANDARDS, SUBPART CC:

Building 961 is not subject to the Air Emission Standards of the California Code of Regulations, Title 22, division 4.5, chapter 14, article 28.5 for the following reason:

- (1) This unit is used solely for the management of low level mixed waste (Title 22, Cal Code Regs., section 66264.1080(b)(6).

UNIT # 6:

Solid Waste Compactor in Building 961

LOCATION:

The Solid Waste Compactor is located inside Building 961 next to the Drum Compactor and adjacent to the Radioactive Material Source Room (Refer to Facility Layout, Figure 3).

ACTIVITY TYPE:

On-site Treatment in Miscellaneous Unit

ACTIVITY DESCRIPTION:

Treatment consists of on-site compaction of solid hazardous wastes contaminated with low level radioactive mixed waste into 55-gallon steel drums prior to shipment to an appropriate off-site disposal facility. The Solid Waste Compactor is used for compressing solid wastes into 55-gallon UN1A2 steel drums or UN1H2 poly drums. Wastes to be compacted include solvent contaminated disposable paper, rags, filters, empty chemical containers, glassware and protective gear, booties and gloves contaminated with low level radioactive mixed waste.

PHYSICAL DESCRIPTION:

The Solid Waste Compactor is NuPac Compactor WC-18000 (see Figure 5). The controls for operating the compactor are on the front panel. This compactor is used for compressing solid wastes into a 55-gallon UN1A2 steel drums or UN1H2 poly drums. Diatomaceous earth is added to the steel drum before filling with solid waste. The steel drum is then placed in the compactor. Steel tubing and large bulky items are not compacted because they can puncture the drum.

The compaction process is automatic. The full cycle lasts less than 90 seconds. Vapors emanating from the compacted materials are removed by a blower in the upper portion of the cabinet. During compacting operations, the blower provides a positive airflow for removing dust and fumes up and around the drum. Exhaust gases leaving the blower are passed through the pre-filter and then through a high efficiency HEPA filter with minimum filtration efficiency of 99.7 % of 0.3-micron particles.

MAXIMUM CAPACITY:

One 55-Gallon Drum

WASTE RESOURCES:

Solid wastes consisting of solvent contaminated disposable paper, rags, filters, empty chemical containers, glassware and protective gear, booties and gloves contaminated with low level radioactive mixed waste are generated from various laboratory research operations.

WASTE TYPES:

Hazardous wastes to be compacted include solvent contaminated disposable paper, rags, filters, empty chemical containers, glassware and protective gear, booties and gloves contaminated with low level radioactive mixed waste.

RCRA HAZARDOUS WASTE CODES:

D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D012, F001, F002, F003, F004, F005

CALIFORNIA HAZARDOUS WASTE CODES:

151, 181, 223, 352, 551

UNIT SPECIFIC SPECIAL CONDITIONS:

- (1) The Permittee is allowed to compact and commingle wastes in the Solid Waste Compactor provided the wastes being consolidated are of the same kind and proper operational procedures are followed in terms of compatibility, spillage and safety of personnel.
- (2) The Permittee is allowed to add absorbent material to drums containing solid waste to fill void space prior to transfer to an off-site permitted facility.

AIR EMISSION STANDARDS, SUBPART CC:

Building 961 is not subject to the Air Emission Standards of the California Code of Regulations, Title 22, division 4.5, chapter 14, article 28.5 for the following reason:

- (1) This unit is used solely for the management of low level mixed waste (Title 22, Cal Code Regs., section 66264.1080(b)(6)).

UNIT #7:

Drum/Solid Waste Compactor in Building 9611

LOCATION:

The Drum/Solid Waste Compactor is located in Bay 9 of Building 9611 (Refer to Facility Layout, Figure 3).

ACTIVITY TYPE:

On-site Treatment in Miscellaneous Unit

ACTIVITY DESCRIPTION:

Treatment involves the use of a Ram Flat Compactor, Model 55AR (Figure 6). This unit is used for compaction of solid wastes into a 55-gallon steel drum prior to shipment to an appropriate disposal facility. This unit is also used to crush empty drums into metal pancakes. Empty containers being compacted include fiber, poly, and metal containers generated from various operations at Sandia. Solid wastes being compacted are solvent or oil contaminated rags, wipes, filters, empty chemical containers, glassware and protective gear, booties and gloves. No low-level mixed waste is compacted in Building 9611.

PHYSICAL DESCRIPTION:

The Drum/Solid Waste Compactor has a non-sparking hydraulic system designed for compacting empty drums or solid wastes contaminated with volatile solvents. The hydraulic system generates approximately 85,000 pounds of hydraulic force at a maximum pressure of 3,000 pounds per square inch (psi).

Ram Flat Compactor, Model 55AR-HY is equipped with an Air Filtration System which includes a pre-filter, High Efficiency Particulate Air (HEPA) filter and Charcoal Carbon Adsorbers. These filtration systems protect the operator from air contamination and dangerous fumes when handling the drums even when the door is open. The industrial grade HEPA filter removes any particulate 3 micron or below at 99% efficiency.

The Air Filtration System is electrically interlocked in the Ram Flat Compactor, Model 55AR-HY. The interlocking electrical system allows the compactor to operate only if the filtration is turned on. This prevents escape of any volatile constituents during compaction. The blower has manual controls and therefore it can remain on during filling of the barrel.

MAXIMUM CAPACITY:

One 55-Gallon Drum

WASTE RESOURCES:

Empty fiber, poly, and metal containers are generated from various operations and laboratories at Sandia. Solid wastes consisting of solvent contaminated disposable paper, rags, filters, empty chemical containers, glassware and protective gear, booties and gloves are generated from various laboratory operations, facilities vehicle maintenance and machine shop.

WASTE TYPES:

Hazardous solid wastes to be compacted include empty fiber, poly, metal containers, contaminated disposable paper, rags, filters, empty chemical containers, glassware and protective gear, booties and gloves.

RCRA HAZARDOUS WASTE CODES:

D001, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D023, D024, D025, D026, D035, D036, D038, D039, D040, F001, F002, F003, F004, F005

CALIFORNIA HAZARDOUS WASTE CODES:

181, 352, 551, 751

UNIT SPECIFIC SPECIAL CONDITIONS:

- (1) The Permittee is allowed to consolidate and commingle wastes at the facility provided the wastes being consolidated are of the same kind and proper operational procedures are followed in terms of compatibility, spillage and safety of personnel.
- (2) The Permittee is allowed to add absorbent material to drums containing solid waste to fill void space prior to transfer to an off-site permitted facility.
- (3) The Permittee is not allowed to compact low-level mixed waste in this unit.

AIR EMISSION STANDARDS, SUBPART CC:

For the use of Drum/Solid Waste Compactor in Building 9611, the Permittee shall comply with all applicable air emission standards pursuant to Title 22, Cal. Code Regs., section 66264.1050 through 66264.1065 for equipment leaks.

PART V. SPECIAL CONDITIONS WHICH APPLY TO ALL OF THE FACILITY'S STORAGE AND TREATMENT UNITS

1. SPECIAL CONDITIONS WHICH APPLY TO THE ENTIRE FACILITY'S STORAGE AREAS

- (a) The Permittee shall comply with applicable provisions of the Land Disposal Restrictions as required by Title 22, Cal. Code Regs. Division 4.5, chapter 18 (commencing with section 66268.1).
- (b) The Permittee shall at all times properly operate and maintain the facility to minimize the possibility of a fire, explosion, or any unplanned release of hazardous waste or hazardous constituents to air, soil, or surface waste which could threaten human health or the environment as required by Title 22, Cal. Code Regs., sections 66264.31.
- (c) The Permittee shall maintain all equipment used to handle, transfer, pump, or store hazardous wastes in a manner that prevents the leaking and spilling of hazardous wastes.
- (d) When the facility is operated during hours of darkness, the Permittee shall provide sufficient lighting to ensure safe, effective management of hazardous wastes.
- (e) The Permittee shall retain on-site, until closure of the facility, a copy of all notices, certifications, demonstrations, waste analyses data, and other documentation related to the management of all wastes subject to land disposal restrictions as required by Title 22, Cal. Code Regs., sections 66264.73(b)(9), 66264.73(b)(12) and 66268.7.
- (f) The Permittee shall maintain at the facility, a current list of hazardous wastes streams handled by the facility. The Permittee shall, as necessary, update the hazardous waste list presented in the approved Part B Application dated September 2003, Section III in accordance with the permit modification requirements contained in Title 22, Cal. Code Regs., section 66270.42(a), (b) or (c). Any additions to the list must be approved by DTSC., in accordance with the requirements of Title 22, Cal. Code Regs., section 66270.41 and/or 66270.42, prior to their inclusion.
- (g) The Permittee shall give notice to DTSC as soon as possible, and in any event, at least 30 days in advance of, any planned physical alterations or additions to the permitted facility as required by Title 22, Cal. Code Regs., section 66270.42. In addition, prior to commencement of the treatment,

storage, or transfer of hazardous wastes at a modified portion of an existing facility, the Permittee shall comply with the requirements contained in Title 22, Cal. Code Regs., sections 66270.30(l)(1) and 66270.30(l)(2).

- (h) The Permittee shall report to DTSC and to the California Office of Emergency Response any incidents of noncompliance with the conditions of this permit and any provisions of Title 22, Cal. Code Regs., division 4.5 or Health & Safety Code, division 20, chapter 6.5, which may endanger health or the environment immediately upon becoming aware of the incident, as required by Title 22, Cal. Code Regs., section 66270.30(l)(6).
- (i) In the event the Permittee foresees exceeding the one year storage limitation for any mixed waste placed into the designated storage areas in Building 961, the Permittee shall submit to DTSC a Request for Storage Extension no later than sixty (60) days prior to reaching the one year storage limitation. The Request for Storage Extension shall include:
 - (1) The justification or statement of basis for requesting extended storage. The Permittee shall demonstrate the efforts being made to comply with the one-year storage requirement.
 - (2) The description of waste streams, waste codes, quantities, one-year storage expiration date, projected shipment date, and container identification of each waste container that will exceed the one-year storage limitation.
- (j) DTSC may grant the Permittee an extension of one hundred eighty days (180 days) beyond the one year storage limitation subject to the justification submitted. The Permittee shall notify DTSC in writing when the waste in Permit Condition Part V (1)(i) is finally disposed of.

2. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, the following documents, revisions and modifications to these documents:

- (a) Waste Analysis Plan, as required by Title 22, Cal. Code Regs., section 66264.13 and this Permit.
- (b) Personnel training documents and record, as required by Title 22, Cal. Code Regs., section 66264.16(d) and this Permit.

- (c) Contingency Plan, as required by Title 22, Cal. Code Regs., section 66264.53(a) and this Permit.
- (d) Closure Plan, as required by Title 22, Cal. Code Regs., section 66264.112(a) and this Permit.
- (e) Inspection schedule, inspection log or summary, as required by Title 22, Cal. Code Regs., section 66264.15(b), 66264.15(c), 66264.15(d) and this Permit.
- (f) Operating Record, as required by Title 22, Cal Code Regs., section 66264.73 and this Permit.

3. SCHEDULE OF COMPLIANCE

The Permittee shall comply with the following:

Tasks	Due Date
(a) Retrofit the Drum Compactor in Building 961	Within one year from the effective date of this Permit
(b) Notify DTSC when the Drum Compactor in Building 961 has been retrofitted. Include in the submittal how the drum compactor was retrofitted to become explosion proof and capable of being used either as a drum compactor or a solid waste compactor.	30 days from date of installation

PART VI. CORRECTIVE ACTION

1. In 1992, the Department of Toxic Substances Control (DTSC) conducted a RCRA Facility Assessment (RFA) for the facility and identified 23 solid waste management units (SWMUs). At that time, only one SWMU (SWMU #1, Fuel Oil Spill Area) required further investigation. The investigation of SWMU #1 has been under the oversight of the San Francisco Regional Water Quality Control Board as the lead agency (SFRWQCB). The investigation and cleanup of SWMU #10 (former Building 913) had been under the oversight of DTSC. On April 25, 2003, DTSC issued a "Statement of Basis for No Further Corrective Action Determination for Former Building 913 Site". The Statement of Basis summarized the prior activities and corrective action activities done at Building 913 Site.
2. In the event the Permittee identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new Solid Waste Management Units (SWMUs) not previously identified, the Permittee shall notify DTSC orally within 24 hours of discovery and notify DTSC in writing within 10 days of such discovery summarizing the findings including the immediacy and magnitude of any potential threat to human health and/or the environment.
3. DTSC may require the Permittee to investigate, mitigate and/or take other applicable action to address any immediate or potential threats to human health and/or the environment and newly identified releases of hazardous waste and/or hazardous constituents. For newly identified SWMUs, the Permittee is required to conduct corrective action. Corrective action will be carried out either under the Corrective Action Consent Agreement or Unilateral Corrective Action Order pursuant to Health and Safety Code, Section 25187.



Figure 1. Location Map, Sandia National Laboratories, Livermore, California

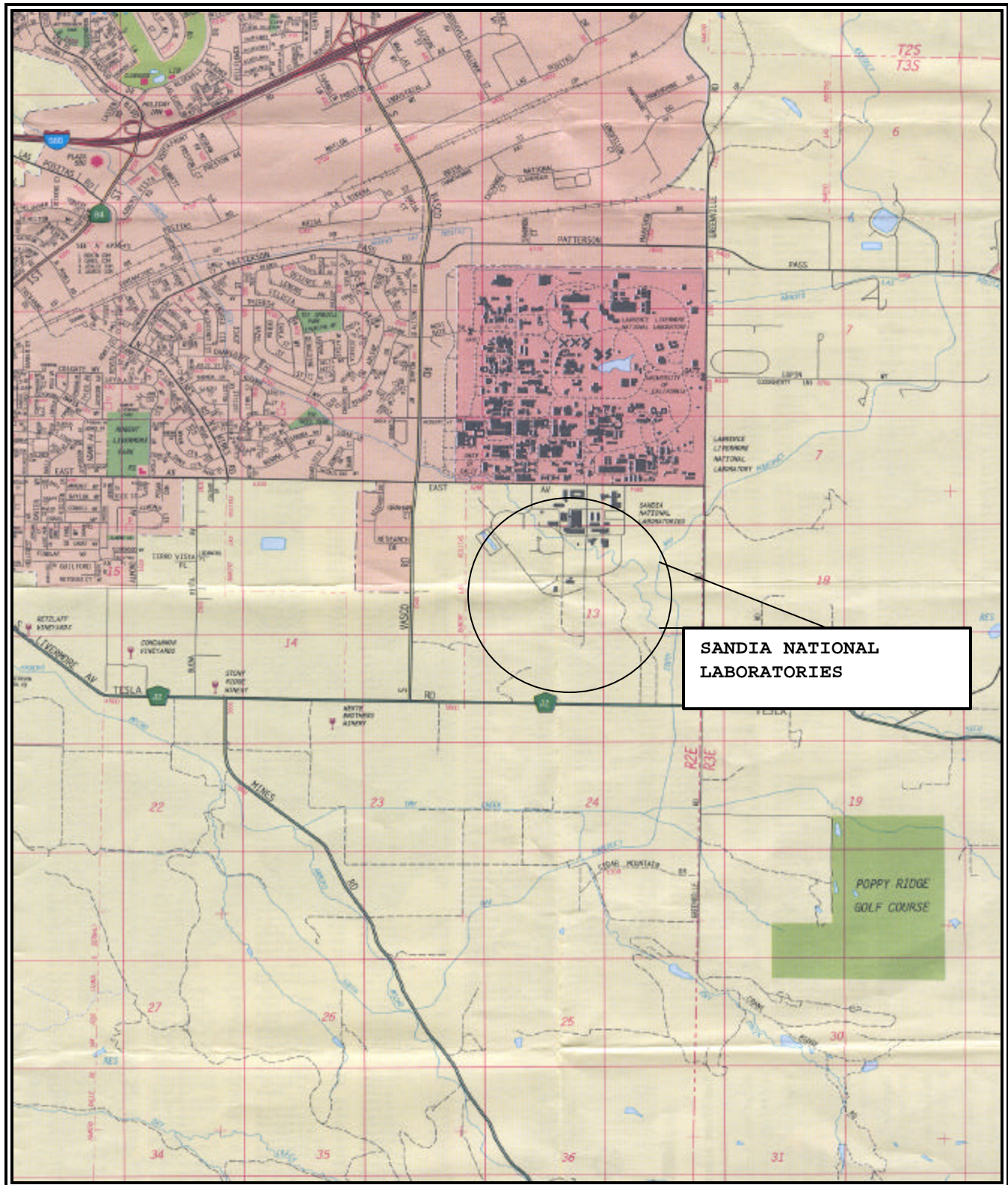


Figure 2. Facility Map, Sandia National Laboratories, 7011 East Avenue, Livermore, California

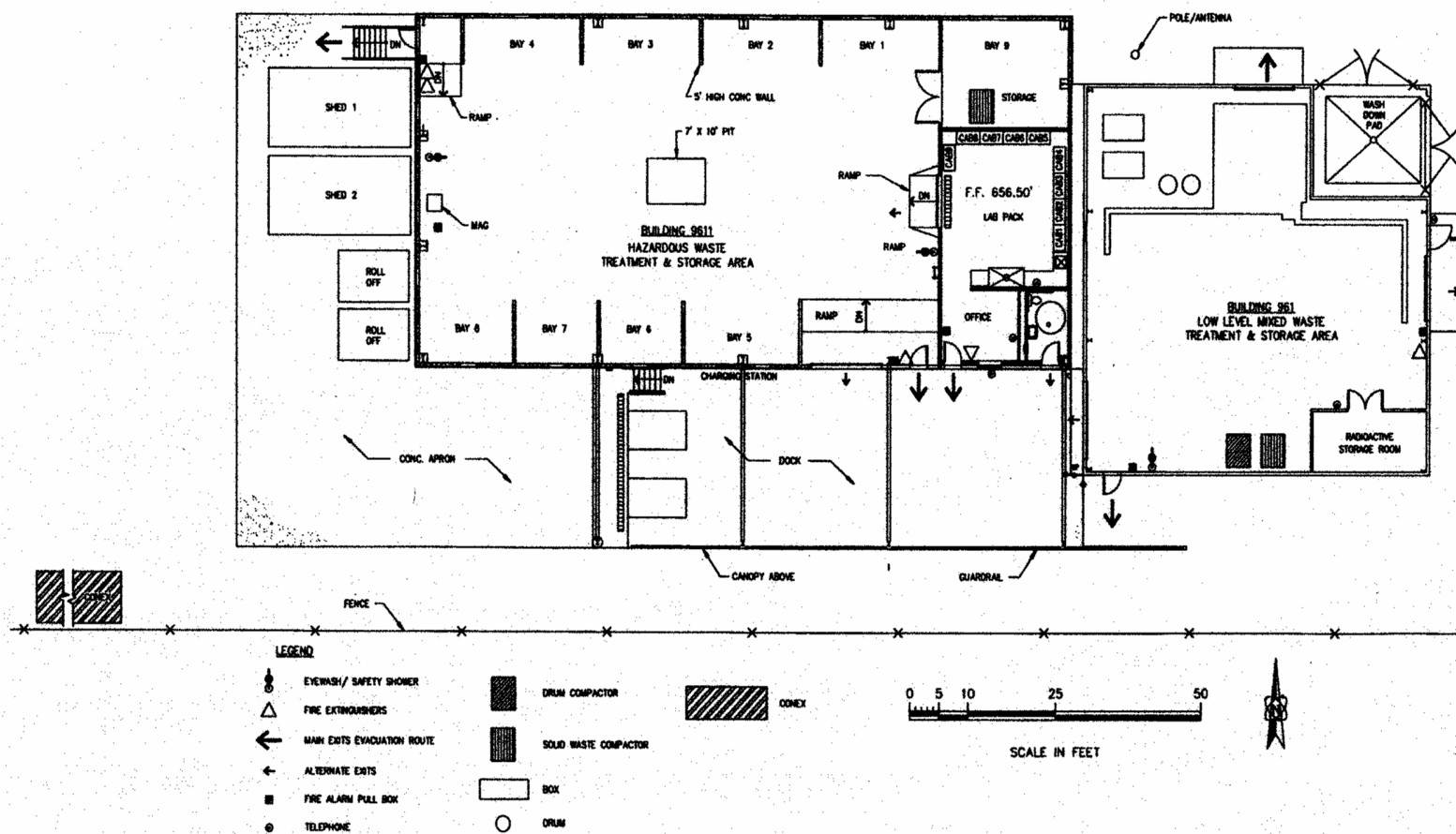


Figure 3. Site Map of U.S. Department of Energy/Sandia National Laboratories, Livermore, California



Figure 4. Ram flat Compactor Model 55E- Drum Compactor in Building 961



Figure 5. NuPac Compactor WC 1800 - Solid Waste Compactor in Building 961



Figure 6. Ram Flat Compactor Model 55AR HY - Drum/Solid Waste Compactor in Building 9611

